

I Claim:

1. A system for supplying consumers with heat energy or with cooling energy, comprising:

at least one source for heat energy or for cooling energy, and an output line communicating with said source;

a controllable distributor device with an input connected to said output line of said source and with a plurality of outputs connected to forward-flow lines for selectively supplying heat or cooling energy via a transfer medium at mutually different temperature levels to a given consumer at a respectively required temperature level;

at least one heat reservoir connected in parallel with each of a plurality of the consumers at mutually different temperature levels, wherein said heat reservoir is configured to store excess heat energy at a given temperature level and to supply heat energy content contained therein to the consumer at the given temperature level.

2. The system according to claim 1, wherein each of the plurality of consumers for heat energy at mutually different temperature levels has a respective said heat reservoir connected in parallel therewith via respective consumer circuits.

3. The system according to claim 1, wherein said source for cooling energy is an exchanger device selected from the group consisting of at least one environmental collector and a heat pump, and wherein a reservoir for cooling energy is connected in parallel to a respective consumer of cooling energy.

4. The system according to claim 1, which comprises shut-off valves connected between the forward-flow lines for feeding heat energy and cooling energy to the respectively associated consumers.

5. The system according to claim 1, wherein one of the consumers is a wall, and wherein reversing valves are connected into the forward-flow lines for feeding heat energy and cooling energy into the walls, and said reversing valves are configured to supply the heat energy into the walls from below and to supply the cooling energy into the walls from above.

6. The system according to claim 1, which comprises plurality of consumer circuits each with a forward-flow line and a return line, and lines directly connecting said consumer circuits via said return lines and said forward-flow lines, are provided, whereby a forward-flow line of said distributor device is connectible to the forward-flow line of said

consumer circuit having a highest temperature level and a return line of said distributor device is connectible to the return line of the consumer circuit having a lowest temperature level.

7. A method for supplying consumers with heat energy or with cooling energy which comprises:

connecting a plurality of consumers to the system according to claim 1;

outputting heat energy from the source and selectively supplying heating energy and cooling energy to the consumers;

storing thermal energy not required by the consumers in at least one of the thermal reservoirs connected in parallel with the consumers of different temperature level, and supplying the thermal energy to the consumers upon demand.

8. The method according to claim 7, which comprises using the thermal reservoir as the source when a heating furnace or a heat pump located in the system is switched off.